



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,148	07/31/2003	Milivoj Konstantin Brun	RD27230-3	9464

7590 06/27/2007
GENERAL ELECTRIC COMPANY (PCPI)
C/O FLETCHER YODER
PO BOX 692289
HOUSTON, TX 77269-2289

EXAMINER

CHEN, BRET P

ART UNIT	PAPER NUMBER
----------	--------------

1762

MAIL DATE	DELIVERY MODE
-----------	---------------

06/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/630,148	Applicant(s) BRUN, MILIVOJ KONSTANTIN	
	Examiner B. Chen	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 40-45 is/are pending in the application.
- 4a) Of the above claim(s) 40-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-27, 40-45 are pending in this application.

The Appeal Brief dated 2/9/07 addressed dependent claims 4-6 which were rejected using the incorrect statute. The examiner has reopened prosecution to address those issues. In addition, an obvious double patenting rejection has been included. The examiner regrets the inconvenience.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-2, 10-11, 16 are rejected under 35 U.S.C. 102(a) as being anticipated by Linn et al. (6,143,376). Linn discloses a method for manufacturing coated short fibers in which the short fibers are coated in a reactor with at least one coating agent and includes exposing a short fiber bundle having a coating or a plastic matrix to a high-frequency field which dissolves the coating or the plastic matrix and is separated into individual fibers and are coated by chemical vapor deposition on all sides by at least one coating agent present in a gas phase (col.1 line 64 – col.2 line 11). Specifically, the short fibers bundles are provided from supply container 10, falls through a feed chute 21 into a rotating feedthrough 22 and enters the reactor 30 (col.3 lines 35-60). Simultaneously, a reaction gas is introduced into reactor 30 through opening 32 and exits via opening 31 (col.4 lines 63-67). The fiber can be fiber reinforced ceramic matrix

Art Unit: 1762

composites (col.1 line 15) and the reactant can be methane and hydrogen/nitrogen (col.5 lines 20-21). In addition, no vacuum is disclosed and thus meets the limitation of claim 16.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 3-9, 12-15, 17-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linn et al. (6,143,376). Linn discloses a method for manufacturing coated short fibers in which the short fibers are coated in a reactor with at least one coating agent by chemical vapor deposition as taken above. However, the reference fails to teach using seals.

It is noted that the feed chutes are utilized and that feeding is not always occurring. Hence, one skilled in the art would realize that stoppers or valves are utilized to stop the flow of materials. These stoppers or valves are utilized read on seals. Hence, it would have been obvious to utilize seals with the expectation of obtaining similar results given the reasons mentioned above.

In addition, the reference fails to teach specific materials, reactants, and pressures. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as materials, reactants, and pressures through routine experimentation in the absence of a showing of criticality.

Additionally, the reference fails to teach the specific temperature range and fiber feed rate. It is noted that a temperature range in Table 1 and a feed rate in col.6 lines 65-67 overlap the claimed ranges. Overlapping ranges are *prima facie* evidence of obviousness. It would have

Art Unit: 1762

been obvious to one having ordinary skill in the art to have selected the portion of Linn's temperature range and flow rate that corresponds to the claimed range.

In dependent claim 4, the applicant requires a single monofilament fiber. It is noted that Linn specifically teaches the deposition onto short fiber bundles (col.3 line 37). Given Linn's teaching of the successful deposition onto a plurality of fibers i.e. fiber bundles, one skilled in the art would reasonably expect that the deposition onto a single monofilament fiber would be successful. Furthermore, the background of Linn specifically envisions the use of filaments (col.1 line 45). It would have been obvious to utilize filaments instead of the short fiber bundles with the expectation of obtaining similar results.

In dependent claims 5 and 6, the applicant requires a fiber tow as well as a plurality of fiber tows. The applicant defines a tow as several hundred filaments (paragraph 5). Linn specifically teaches the deposition onto short fiber bundles (col.3 line 37). While Linn does not explicitly disclose how many fibers are in the fiber bundle, Figures 7a to 7c are images of recycle carbon fiber bundles (col.5 lines 36-37). Clearly, figure 7c shows at least a dozen fibers. Given Linn's teaching of the successful deposition onto a plurality of fibers i.e. fiber bundles, one skilled in the art would reasonably expect that the deposition onto a fiber tow (i.e. several hundred filaments) would be successful.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-53 of copending Application No. 11/263715. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inclusion of a CMC fiber is an obvious variation. Copending application '715 doesn't claim the kind of fiber utilized. The recitation of a CMC fiber would have been obvious to one skilled in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1762

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bc
6/25/07



BRET CHEN
PRIMARY EXAMINER